

Waste not, want not:
A history and analysis of the proposals to import nuclear waste into the Marshall Islands

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Preface

The Republic of the Marshall Islands (RMI) government's proposals to conduct feasibility studies to determine the suitability of certain locations within the RMI for imported nuclear waste to be stored or disposed of have been the source of much consternation throughout the Pacific region. This paper is a step toward understanding the issues at play in the development of such proposals, how and why they come about, and what forces stand behind, and in the way of them.

On one level, I sympathize with the desire of the RMI government to develop an independent economy, to not have to depend on foreign aid donors, and to know the freedom of greater self-reliance. But questions of "who will shoulder the risk?" and "who will enjoy the return?" are important to ask. It is also important to be cognizant of the basic fact which underlies all discussion of international waste transfers between producer (of wastes) nations and non-producer nations -- **the community which has generated the waste obviously does not think it is acceptably safe to store it, or they would do so within their own borders.**

I am personally against the transfer of hazardous waste (radioactive or otherwise) from producers to non-producers. I agree that there is a certain element of unobjective terror, a folk-generated stink aura surrounding nuclear power and its by-products -- but images of Chernobyl and Hanford constantly remind us that sometimes even the experts can be wrong, and that what is sometimes classified as "irrationality" often turns out to be a justified fear of the inevitability of Murphy's Law. If such concerns should exist anywhere, it is in the Marshalls.

I have done as much as was possible within my time and resource constraints to ensure the accuracy of the information contained in this paper. Any errors are my responsibility. Keep my bias in mind as you read (see previous paragraph).

Thanks to my committee -- Terence Wesley-Smith, Karen Peacock, and Bob Kiste. Terence, thank you for your support and encouragement, not just in the production of this paper, but throughout my time at CPIS -- every department needs a professor like you, one who is genuinely and personally concerned for his/her students. Karen, thank you for often pointing me to the right sources, for personally bringing to my attention bits of information which I would never have discovered on my own.

Mahalo also to my classmates, and to the wonderful woman who kept me going throughout this past year, Melissa.

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Introduction

The proposal by the government of the Republic of the Marshall Islands (RMI) to import nuclear waste in return for financial compensation has caused considerable controversy both within the RMI, within the Pacific region, and beyond. The radioactive legacy of the American atomic testing program (centered on Bikini and Enewetak) is something that remains in the everyday lives of many Marshallese. Why would a proposal to import radioactive waste be considered?

That is one of the questions this paper attempts to answer. In answering it, the history of the Marshall Islands must be considered alongside the present social and economic conditions. In order to understand present attitudes toward nuclear waste importation, the history of the Marshall Islands' involvement in nuclear waste issues is outlined and discussed.

The question of "why?" also brings into play issues of sovereignty, the desire of developing nations to break free of dependence on foreign aid, and the morality of developed countries sending hazardous waste to developing ones. Proponents of nuclear waste importation proposals within the RMI government argue that its present dependent economic state could be improved if these proposals are found to be viable. Increased self-sufficiency could mean greater self-determination, and American non-support of the RMI's nuclear waste importation proposals is seen by some proponents of the plans as an attempt to keep the Marshall Islands dependent on American aid. On the other hand, opponents sense neo-colonialism in the transfer of hazardous wastes from developed nations to developing ones.

Debate over the proposals has taken place both within the RMI, the Pacific region, and around the world. This paper examines the variety of viewpoints within the RMI, the responses of the Marshalls' Pacific neighbors, and of the positions of those further afield (including the

United States). Past responses by Pacific Island countries to nuclear-related issues are touched on and compared with their responses to the proposals put forward by the RMI.

This paper also examines the technical, legal, and moral barriers to the siting of a nuclear waste storage facility in the Marshalls, and considers the potential diplomatic, economic, and social impacts that the importation of nuclear waste by the RMI government could bring. The rationales given by proponents of the present nuclear waste importation plans are analyzed and compared with those given over the past two decades. Finally, this paper suggests how the concerns at the root of these proposals may be addressed, and how the implementation of a nuclear waste importation proposal may be avoided.

Social and economic change during the American period

To better understand the present social and economic condition of the RMI, it is necessary to hark back to the beginnings of the Trust Territory of the Pacific Islands¹ (TTPI), when most of Micronesia was placed in the “protective” custody of the United States by the United Nations after World War II. Unlike any other trust territory established after World War II, the Trusteeship created by the United Nations in 1947 was designated as a *Strategic* Trusteeship, which allowed the U.S. to maintain strict control over the islands until the Micronesians were “ready” for self-determination.

Since the terms of the strategic trust allowed the U.S. to close all or part of the region in trust to U.N. inspection for “security” purposes, little supervision or critique of U.S. fulfilment of its duties was possible until the ban on travel to the region was lifted in 1961. The scathing U.N.

¹ Consisting of the Carolines, the Marianas, and the Marshalls.

report on U.S. administration of the region that followed a U.N. team visit to the area in 1961 prompted President Kennedy to begin a rapid development program that encompassed economic, social, educational, and political aspects. But according to National Security Action Memorandum #145 dated 18 April 1962, all development programs were to be oriented toward maneuvering the islands into a “permanent relationship with the U.S. within our political framework,” which was certainly not in keeping with the spirit of the Trusteeship agreement which charged the U.S. with “preparing” the citizens of the Trust Territory for self-determination.²

In 1963, President Kennedy sent Anthony Solomon, a successful businessman and Harvard economics professor (and later assistant secretary of state) to the islands as head of an eight-man team charged with drawing up a master plan of development that would achieve U.S. political goals in the region. Solomon’s conclusions were included in the infamous “Solomon Report” which advocated a crash-program of massive aid and improvement of living standards, the apogee of which was to coincide with a plebiscite on future status.³

The cold-war-induced aid flowed in, but the Marshalls’ political status was not decided until after years of status negotiations. On 12 July 1978, the Marshallese voted to separate from the other districts (at that time Palau, Kusaie, Ponape, and Yap) of the Trust Territory. In September 1983, 58% of Marshallese voters supported a Compact of Free Association with the U.S., which will have brought in over US\$1 billion in cash and services when the 15-year

² Hezel, Francis. Strangers in Their Own Land.

³ Ibid. Kennedy was assassinated six weeks after receiving the report. Apparently it was classified and buried away in a locked file until Micronesian student activists at the University of Hawai’i published part of it in 1971.

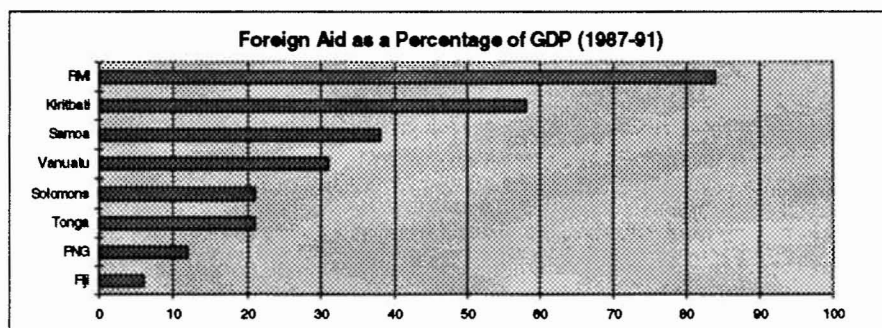
agreement ends in 2001 (the Compact period began in October 1986). In return, the U.S. was given the authority and responsibility for the defense of the RMI for the duration of the Compact, which allowed the continuation its policy of strategic denial (to the Soviet Union of old, and perhaps the China of today), and became the 30-year lessee of the Kwajalein Missile Range.

The state of the Marshalls today

Without romanticizing the precontact, pre-intensive colonization lives of the Marshallese, let it be said that they lived in relative harmony and balance in a delicate environment, having developed a system of social organization well-suited to atoll life. The economy of the Marshalls was entirely subsistence-based. Although island life began changing upon initial contact with Europeans, and continued to change through the Spanish, German, and Japanese colonial periods, it was the influx of American goods, processed food, and government service jobs into the region beginning in the early 1960s which has brought about the speediest period of transition from a subsistence economy to a cash economy. The Marshallese quickly became dependent on imports of food and other goods.

These imports are paid for almost entirely with cash received from the U.S. in the form of Compact payments and to a lesser extent nuclear claims compensation trust fund revenues.⁴

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A comparison between the RMI and selected Pacific Island nations. The RMI is far and away the most aid-dependent nation in the Pacific. Data used in the creation of this chart taken from the Pacific Human Development Report. United Nations Development Program booklet. 1994.

Other sources of revenue are negligible -- tourism, copra, fish, handicraft. With very little in the way of resources for export, the RMI has been running massive trade deficits for years. The total value of 1991 exports was US\$2.89 million. In contrast, imports totaled US\$56.4 million that same year, besting exports by the staggering ratio of nearly 20 to one.⁵ More than 85% of the imports come from the United States and Guam.⁶ According to RMI government statistics, the gap has shown recent signs of narrowing,⁷ but it should be noted that statistics for the RMI often vary from source to source.

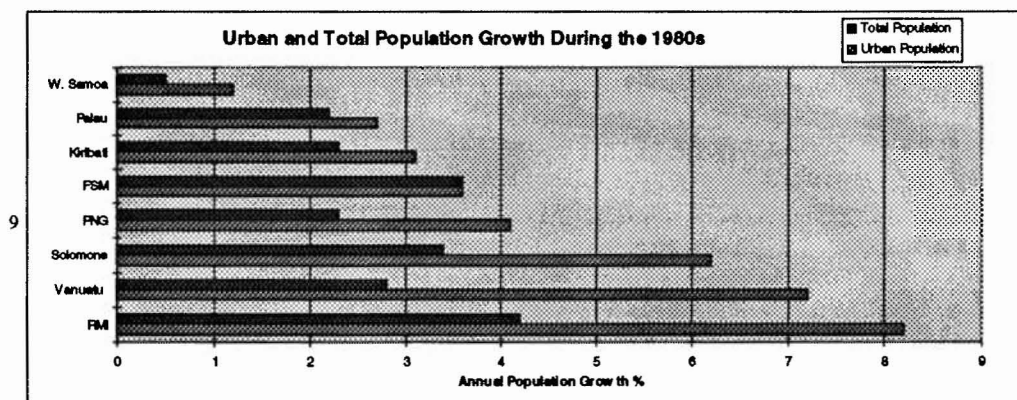
The RMI has begun arresting its once-staggering population growth rate, which ran at more than 4 percent throughout the 1980s,⁸ but still faces population-related problems. Over half of the Marshalls' population is under the age of 14. Ever-increasing numbers of Marshallese are moving to the two urban centers -- Majuro and Ebeye -- from the outer islands.⁹ If there were an

⁵ National Center for Development Studies. South Pacific Economic and Social Database (RMI). 1996.

⁶ 61.0% from the U.S., 24.1% from Guam. Ibid.

⁷ The RMI government claims that in 1994, exports totaled US\$22.17 million to imports of US\$70.39 million. Statistics from RMI Online (the RMI government's official online information service.) www.clark.net/pub/rmiemb/tradstat.htm. Retrieved 10 July 1997.

⁸ United Nations. Pacific Human Development Report. 1994.



The RMI population growth problem is the worst in the Pacific. Data taken from the Pacific Human Development Report. United Nations Development Program booklet. 1994.

abundance of jobs to be found there, then this population shift could be seen as a natural centralization of labor, capital, and industry. But many come to share the income of relatives with cash employment and enjoy the excitement of the urban centers. As could be expected, the crowding of so many people into such a small area has resulted in health concerns, crime, and other problems that come with too many people living in too small a space.

In short, the RMI is in a tight spot economically. Unrealistic expectations have been built up by U.S. aid, and the relatively high-paying government jobs built on no real (foreign-aid independent) economic base have resulted. The lure of quick and easy money is attractive, especially to a nation with limited prospects. The RMI was, until recently, selling its passports as one means of obtaining quick revenue.¹⁰ The Marshall Islands government has entertained all manner of development project proposals, some more plausible than others.

Unfortunately, developing countries seem to attract globetrotting con artists promoting get-rich-quick schemes. Pacific Island countries such as Vanuatu, the Cook Islands, and Nauru have had experiences with these individuals. The RMI recently had a brush with one. In the first half of 1996, the RMI issued ten letters of guarantee worth US\$100 million apiece and power of attorney to represent the country to a gentlemen named Rodam Twiss, who promised to earn the

¹⁰ The passport offer was originally designed to attract Hong Kong citizens and Taiwanese, since Marshallese citizens have unrestricted entry to the United States. The price was US\$250,000 initially, but has dropped to between US\$25,000 to \$40,000. The rub is that U.S. immigration law stipulates that naturalized citizens must have resided in the Marshalls for five years before being allowed to enter the U.S. Almost 1,000 passports have been sold, primarily to citizens of the People's Republic of China, who desire to reside in the RMI. Now, local businesspeople are complaining that the Chinese are driving them out of business -- "Sooner or later, they'll own everything," said a local businessman. "With foreigners, there are ways to control their activities, but they're now Marshallese." Some also worry because background checks are not done on prospective immigrants. Foreign Minister Phillip Muller recently tried to calm worries by announcing that passports were no longer being sold. "Not anti-Chinese but. . . Local businesses: trampled." Marshall Islands Journal. 4 July 1997. 1. Also "If U.S. has problem, what about RMI?" Marshall Islands Journal. 11 July 1997. 22. "Philip Muller clarifies: Passports not for sale." Marshall Islands Journal. 18 July 1997. 1.

Marshalls US\$1 billion.¹¹ It was only the RMI's quick response to a warning from the U.S. Treasury department to Banny deBrum, RMI ambassador to the U.S. in Washington, D.C. that saved the Marshalls from a disaster. The Marshalls received "a black eye for foolishness" but suffered little other damage. Twiss had previously scammed the Nauruan government as part of a money-laundering operation.¹² The need to exercise care in considering project proposals is further illustrated by the following case.

Bait and switch -- the Admiralty Pacific affair

In one of the more widely publicized development plans in the Pacific, from 1988 to 1990 the RMI entertained proposals that would have permitted the dumping of U.S. West Coast garbage and old tires in Marshallese lagoons. Admiralty Pacific, Inc. (the promoter of both ideas) and Amata Kabua (the late President of the RMI) at one point had reached tentative agreement to ship up to 10 percent of the household waste produced on the West Coast to the Marshalls for disposal, ostensibly to create more land area. The RMI was to receive compensation on the order of tens of millions of dollars.¹³ The supposedly non-toxic and non-hazardous waste was to be delivered in compressed one to ten ton plastic-shrinkwrapped bales, which were to be dumped onto dry land or in the lagoon, then covered with six feet of coral and top soil. The promoters estimated that 20 square miles of new land could be created (compared with Majuro's 2.5 square

¹¹ "\$1-billion in guarantees canceled by Marshalls." Pacific Magazine. September/October 1996. 17.

¹² North, David. "Waves of financial 'scams' strikes Island countries." Pacific Islands Monthly. September 1996. 23.

¹³ "Waste-men want atoll." Marshall Islands Journal. 21 October 1988. 1.

miles and the RMI's 72 square mile total land area).¹⁴ According to Greenpeace, the 34.8 billion pounds of "household" wastes contained "more than 125 million pounds of hazardous waste."¹⁵ When this deal fell through, Admiralty Pacific came back with a plan to ship up to 100 million waste tires to the Marshalls to create artificial reefs.¹⁶ However, waste tires are not considered acceptable reef-building material, and are even prohibited by law in California from being used for reefs.¹⁷

Greenpeace investigated Admiralty Pacific and discovered that Jim Thompson, one of the heads of the company who was negotiating with the RMI, had served four months in jail for securities fraud and grand larceny in the mid-1970s, and was being investigated by the Securities Division of the Washington State Department of Licensing at the same time that he was negotiating with the RMI.¹⁸ To top it all off, Dan Fleming, Thompson's partner at Admiralty Pacific, split from the company and founded a rival firm, Micronesia Marine Development Inc. (Micromar), to vie for landfill approval. In a letter announcing his split (published in the Marshall Islands Journal), Fleming accused Thompson of secretly planning to bring nuclear waste to the Marshalls. A June 6, 1989 letter from Thompson to engineer Carl Strande surfaced giving Strande power of attorney to represent Admiralty Pacific in "receiving bids for work to be done

¹⁴ "Promoters outline waste disposal plan." Marshall Islands Journal. 28 October 1988.

¹⁵ "Greenpeace says Admiralty plan will bring 125 million pounds of toxic waste." Marshall Islands Journal. 21 July 1989.

¹⁶ In a strange connection, Native American tribes were slated to secure and prepare the tires for shipping. "Give Us Your Tires." The Nation. May 21, 1990. 696.

¹⁷ C. Robert Feldmeth, a Claremont McKenna College biology professor, has pointed out that the Marshalls are not desperately in need of reef-building materials, situated as they are in a latitude and area of the world "where reef-building corals are abundant." Ibid.

¹⁸ "Greenpeace denounces US plans for Pacific garbage dumping project." Pacific Report. 21 June 1990. 1.

the projects in the Marshall Islands, including but not exclusive of the landfill, cogeneration and nuclear waste disposal.”¹⁹ Thompson countered by saying that this was only “representing a process which might ‘clean up Bikini and the other nuclear troubled atolls’ and would not involve the importation of other nuclear waste, and that the flap was “a very clumsy attempt by Dan Fleming to discredit Admiralty Pacific, Inc.”^{20 21} Nevertheless, neither Admiralty Pacific nor Micromar got the requisite approvals to undertake the project.

Past nuclear waste importation proposals involving the Marshall Islands

The Marshall Islands’ involvement with nuclear waste issues of course stretches back to the first American atomic bomb test of Operation Crossroads in 1946. But nuclear waste issues not directly relating to the U.S. nuclear testing first surfaced in 1979.

The demand for storage and disposal facilities is very great, and nations willing to take the waste are sure to be well compensated. Nowhere is the lure of compensation more effective than in developing countries, where governments desperate for revenue may entertain proposals that other countries would not.

1979: The U.S. considers a Pacific regional spent nuclear fuel storage site

An article in the Washington Post dated March 28, 1979 first revealed a secret American proposal to determine if Wake, Midway, or Palmyra could provide suitable storage sites for spent

¹⁹ “Admiralty negotiating nuclear waste deal?” Marshall Islands Journal. 8 September 1989. 1.

²⁰ “Admiralty Pacific head denies plans for nuclear dumping.” Pacific Report. 12 October 1989. 6.

²¹ Thompson, Jim. Letter. Marshall Islands Journal. 29 June 1989. 6.

nuclear fuel from Japan, South Korea and Taiwan. The Americans desired Japanese cooperation with the proposal, which was ultimately part of its desire to discourage reprocessing of spent nuclear fuel by providing a storage alternative.²² Palmyra moved to the top of the list of the three candidate sites on the basis of the most positive convergence of “oceanographic, meteorologic, and various political factors. . .”²³

In a June 5, 1979 closed U.S. Senate hearing on the matter, Assistant Secretary of State Thomas Pickering told the committee that he would prefer not officially confirming the consideration of Wake as a potential storage site to the Marshall Islands, as the U.S. was then engaged in heated status and Compact negotiations with the Marshallese. This reluctance to officially state that Wake was still under consideration was in part due to:

. . . a latent and longstanding but rather unviable Marshallese claim to Wake,²⁴ and Wake is in the region of the Marshalls . . . there would be some extreme sensitivity at this critical time in the negotiations to a public statement about Wake and it would, I think, from [the lead U.S. negotiator with the Marshalls’] point of view, make it extremely difficult for him to continue to deal constructively with this problem.²⁵

²² Reprocessing allows the “recycling” of plutonium and uranium from spent nuclear fuel, which can then be used as fuel -- decreasing the need for more mining of those elements, reducing the volume of waste to be disposed of, and removing plutonium’s radioactive contribution to the waste. The U.S. opposes reprocessing precisely *because* it produces plutonium. Plutonium, key to the construction of nuclear weapons, is seen as the holy grail of certain parties (terrorists, ambitious nations). Reprocessing undermines the American policy of promoting non-proliferation of nuclear weapons. Murray, Raymond. Understanding radioactive waste. 4th ed. Columbus: Battelle, 1994. 79.

²³ United States. Congress. Senate. Committee on Energy and Natural Resources. Hearing on Pacific spent nuclear fuel storage. 96th Congress, 1st Session, S. 1119. Washington: GPO, 1979. 10.

²⁴ The Marshallese name for Wake is EnenKio. The Marshallese claim is based on their centuries-old pattern of visits to Enenkio to hunt birds and sea turtles. Douglas, Norman, Nagaire Douglas. Pacific Islands Yearbook. 17th ed. Suva: Fiji Times, 1994. 719.

²⁵ United States. Congress. Senate. Committee on Energy and Natural Resources. Hearing on Pacific spent nuclear fuel storage. 96th Congress, 1st Session, S. 1119. Washington: GPO, 1979. 26-27.

While America has not officially studied the suitability of Marshallese atolls for use as nuclear waste sites, and now has designated Nevada as the only place it will look, the idea *was* considered in certain circles at that time. A 1982 paper by Army Lt. Col. William Spicuzza discusses the desirability of a regional storage site located on an island in the Pacific, and although the report primarily focuses on Palmyra (and to a much lesser degree Wake, Midway, Marcus, and Johnston), two appendices discuss storing spent nuclear fuel on Runit island, Enewetak atoll. A plan for gaining acceptance of such a proposal is laid out, recognizing the vulnerable economic and social condition of the displaced Bikinians and Enewetakese:

The United States should approach the GMI (Government of the Marshall Islands) in a very low key manner, presenting the basic reasons for them to consider such a proposal. The Enewetak people and their government may recognize the economic advantages, and formally announce their willingness to serve as the host for a regional storage site.²⁶

Of course this was purely a hypothetical proposal -- but published as it was in the National Security Affairs Issue Papers series, whose mission “is to contribute new insights and background materials to national security policymakers. . .”, it certainly must have entered into the consciousness of more than a few U.S. policymakers.

1980: Round one -- the RMI nuclear waste importation proposal saga begins

Pacific Islanders have universally opposed the dumping of nuclear wastes into the ocean. The Marshall Islands joined in protests of the Japanese practice of disposing of (low-level) wastes in this manner through the early 1980's. A plan of particular concern to Pacific nations, and

²⁶ Spicuzza, William L. 1982. “National policy implications of storing nuclear waste in the Pacific region.” National Security Affairs Issue Paper 82-1. Washington: GPO, 1982. Appendix A (34).

especially those in the North/Mid-Pacific region was the Japanese proposal to begin a full-scale Pacific dumping program in an extremely deep part of the ocean (6,000 meters) about 1,000 km northeast of the Marianas. In late 1979, Japan revealed that it completed a “pre-operational safety assessment,” and had approved (but had not executed) an experimental dumping of between 5,000 and 10,000 55-gallon drums full of cement-mixed low-level radioactive waste (containing waste of about 500 curies) that was to take place in fall 1981.^{27 28} The plan was that if oceanographic monitoring revealed safe or no diffusion of radioactivity, the full-scale dumping program of one to two million drums containing about 100,000 curies per year was to be undertaken.²⁹

At the 1980 South Pacific Forum in Kiribati a resolution was adopted condemning nuclear waste dumping, although not singling out Japan for castigation. In September 1980, following a visit to Japan and a briefing on Japanese nuclear waste ocean-dumping plans at the Pacific Basin Chief Executive Conference held in Guam (the Japanese unsuccessfully attempted to convince Pacific Island leaders that the proposal was safe), President Kabua said in a radio interview that he had heard that the U.S. wanted to use Wake Island to store Japanese waste in exchange for “millions of dollars.” At this point Compact negotiations were in full swing, and sentiment for independence was high. In the same interview in which Kabua stated that “. . . it is now very clear that the U.S. wants to keep us in a state of begging . . .” he appeared to off-handedly

²⁷ Ogashiwa, Yoko S. “Regional protests against nuclear waste dumping in the Pacific.” *Journal of Pacific Studies*. Volume 15, 1990. 51.

²⁸ Takeuchi, Gary. 1982. “Opposing nuclear waste disposal the Pacific Way: Appropriate regional institutions for Pacific Basin action..” 1. Available at the Hamilton Library, University of Hawai’i at Manoa.

²⁹ Van Dyke, J., Smith, K. R., Siwatibau, S. 1983. “Nuclear activities and the Pacific Islanders.” Presented at the Nuclear Electric Power Conference, Resource Systems Institute, East-West Center, Honolulu, Hawaii. 26.

mention the possibility of nuclear waste importation, stating that “We don’t know if the Marshalls could think of helping the Japanese with their [nuclear waste] problem and take the millions.”³⁰

In late 1980, the Japanese postponed the implementation of the dumping phase of the low-level waste disposal project, and in May 1981 the Director of Japan’s Science and Technology Agency told the governors of Guam and the Northern Marianas Islands that “Japan has no intention of going ahead without the consent of all of the Pacific nations. We will not proceed without an actual agreement . . . We do not want to force the issue.”³¹

In early April 1981, the Marshalls government was approached by the Japanese government about the possibility of using Bikini as a nuclear waste storage site.³² Although no specific proposals were presented, RMI Minister of Internal Affairs Wilfred Kendall said that the general idea was to store waste at Bikini no more radioactive than that which resulted from the bomb testing.³³

At the Pacific Basin Chief Executive Conference held in November 1981 on Guam, President Kabua proposed that Japan consider using land such as Bikini for disposal of the waste rather than dumping it into the ocean, but the Japanese insisted on continuing to pursue their tentatively postponed original ocean dumping program.³⁴ The reason for this shift in attitude is

³⁰ Smith, Dan. “Dependence or independence? Kabua frustrated by American interference.” Micronesian Independent. 26 September 1980. 1.

³¹ Van Dyke, J., Smith, K. R., Siwatibau, S. 1983. “Nuclear activities and the Pacific Islanders.” Presented at the Nuclear Electric Power Conference, Resource Systems Institute, East-West Center, Honolulu, Hawaii. 27.

³² “Japanese request nuclear waste storage.” Marshall Islands Journal. 1 May 1981. 1.

³³ Ibid.

³⁴ “Japanese newspaper reports on President Kabua’s Japan trip.” Marshall Islands Journal. 6 October 1982.

unclear.

Although Japan threatened to dump low-level waste as planned over the next several years, Pacific Island nations kept up sufficient pressure through such actions as the 1982 establishment of the South Pacific Regional Environmental Program (SPREP) and the adoption of the 1985 South Pacific Nuclear Free Zone treaty (SPNFZ) that Japan never did.³⁵

1987-89: Round two -- Do we have a volunteer?

On December 16, 1987, President Amata Kabua telexed the U.S. State Department and U.S. Senator John Breaux of Louisiana, proposing a feasibility study for storing and disposing of nuclear wastes on radiation-damaged atolls in the Marshalls. Some members of the U.S. Congress were angry that this “eleventh-hour” proposal would “undermine the process to designate one [nuclear waste disposal] site” in the United States (Nevada was the frontrunner). But a provision to consider the Marshalls was slipped into the 1988 U.S. budget bill.³⁶

Although the U.S. Senate had chosen Nevada, the U.S. House of Representatives voted to appoint a “nuclear negotiator” to try to get a volunteer state to come forward. A compromise was struck by which Nevada would be chosen by default if a volunteer did not come forward within a year. President Kabua asked that the Marshalls be considered alongside the rest of the states.

U.S. State Department officials and many members of Congress were unhappy that the

³⁵ Yoko Ogashiwa’s excellent article (noted in the bibliography) details regional actions that helped prevent dumping.

³⁶ “President’s request gets U.S. nod for nuclear waste dump study.” Marshall Islands Journal. 1 January 1988. 7.

Marshalls had volunteered such an alternative, just as the acrimonious debate which finally selected the Yucca Mountain site in Nevada as the location for the repository study had ended. Dan Clare, a State Department science advisor noted "The long and short of it is that the Marshalls were interested . . . but this is something no one wants to pursue."³⁷

The January 1988 debate in the Nitijela (the RMI legislature) which followed revealed the strange twists of argument. Tony deBrum's asked "If it is our wish to prevent more nuclear pollution, why are we volunteering to store waste with us? . . . We agreed with other countries that we should prevent more pollution and then we turn around and we say 'come and see if it's safe to store the waste with us.'" President Kabua's response:

These are good questions and there are no correct answers . . . We also have to consider the fact that maybe there are countries dumping in the Pacific without anybody's knowledge. I believe this could happen. I don't like this myself. But I believe there should be a storage site where we could monitor and be able to control it. If the wastes are scattered or underwater there will be nothing we can do . . . If it is true that the Marshalls are contaminated and lives are being destroyed we are going to have to move out. There will be no country in this would be willing to say here take this \$100 million and go live where it is not contaminated. We have to find a way. If this money will help us buy land that is not contaminated like in Australia or other places, after we find out we must evacuate the Marshalls. That is why we need a feasibility study . . . we have not decided to store it yet. What we are trying to find out is, will it be safe to collect and store it.³⁸

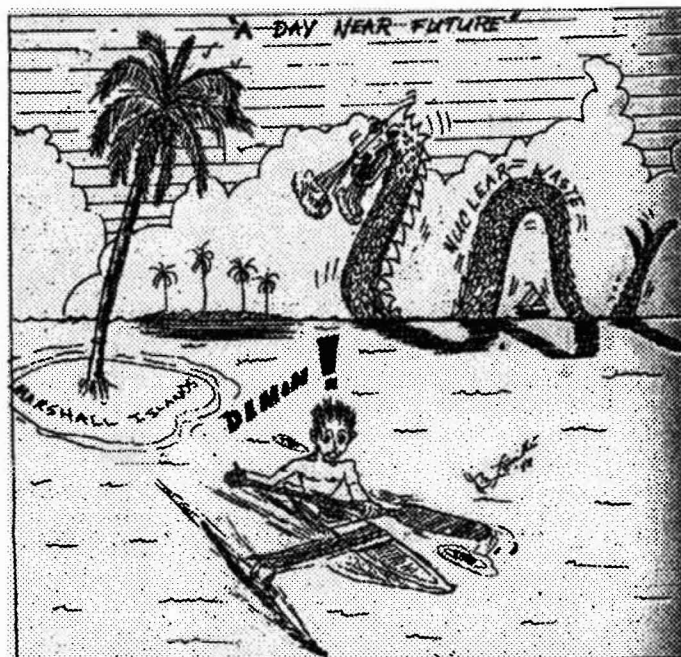
Nevada Congresswoman Barbara Vucanovich, who had vehemently opposed the selection of her state as the national repository site, visited the Marshalls in April 1988, noting the benefits

³⁷ Teare, John. "State, Rep-Mar officials woo Nevada delegation, but . . . U.S. officials voice opposition to Marshalls N-waste." Marshall Islands Journal. 5 February 1988.

³⁸ "No conflict, says President." Marshall Islands Journal. 29 January 1988.

that would accrue to the Marshalls' should they be selected -- "If the repository proves suitable, this would be a way for the Marshall Islands to become economically independent."³⁹ Majuro Senator Tony deBrum had these words for the Nevada delegation pushing the proposal -- "They're gamblers in Nevada. They gamble above ground, let them gamble below ground as well."⁴⁰ Nothing became of the proposal, and Nevada became the chosen site by default.

In February 1989, President Kabua talked to Interior Secretary Manuel Lujan about the possibility of conducting a feasibility study for the storage of low-level nuclear waste. Upon his return in late July 1989 from Fiji, New Zealand, and the South Pacific Forum meetings in Kiribati, Kabua announced that the nuclear waste storage proposal would no longer be discussed.⁴¹



A case of resisting the serpent?
Marshall Islands Journal. 22 April 1988. 2.

³⁹ Teare, John. "State, Rep-Mar officials woo Nevada delegation, but . . . U.S. officials voice opposition to Marshalls N-waste." Marshall Islands Journal. 5 February 1988.

⁴⁰ "Quote of the week." Marshall Islands Journal. 14 October 1988.

⁴¹ "N-waste proposal dropped." Marshall Islands Journal. 4 August 1989.

1994-present: Round three

The RMI again began advancing repository proposals in early 1994. In late April 1994, Wilfred Kendall said that total compensation figures “are very preliminary” but could be in the billions of dollars.⁴² Lobbying of the governments of South Korea, Taiwan, and Japan to finance the project was undertaken.⁴³

Washington, D.C.-based Pan Pacific Consolidated, Inc., headed by Ret. Admiral Daniel J. Murphy (former chief of staff to then-vice-president George Bush) envisioned the development of a US\$9 billion above ground storage facility, with spent nuclear fuel and high-level waste being delivered by newly constructed, specialized nuclear transport ships. Short and long-term storage and disposal facilities were to be constructed and utilized in a four-phase operation -- the outline of which was detailed in a letter dated October 11, 1994 from Pan Pacific Inc. to Amata Kabua. The RMI was offered US\$160 million over five years and liability assurances for its assent to the proposal.⁴⁴ The RMI later rejected the proposal in a three-page letter to Admiral Murphy “telling him in no uncertain terms that the Marshall Islands wanted no part of any business dealings with his company.”⁴⁵

A March 1995 “Working Meeting on Feasibility Studies for RMI Nuclear Waste Facilities” was held in Taipei at Taipower (Taiwan’s government-run power utility) headquarters between Marshallese and Taiwanese officials. The parties agreed to form an Ad Hoc Regional

⁴² “RMI \$ billions from world’s waste?” Marshall Islands Journal. 6 May 1994. 1.

⁴³ Johnson, Giff. “Marshall N-waste march continues.” Islands Business Pacific. June 1995. 50-52.

⁴⁴ “RMI offered \$160 million for waste site.” Marshall Islands Journal. 25 November 1994. 3.

⁴⁵ “N-waste off agenda?” Marshall Islands Journal. 2 August 1996. 3.

Working Group for Feasibility Studies of International Nuclear Waste Facilities in the Marshall Islands, which would include Taiwan, Japan, South Korea, and the Marshalls.⁴⁶

In April 1995 Japan announced that it did not intend to participate because it intended to dispose of its nuclear waste within its borders.⁴⁷ “We are also aware that neighboring governments are not responding in a positive way to this project. As a government we must take this into account,” said Japanese Ambassador to the RMI Takakazu Kuriyama.⁴⁸ However, according to Harry Sigerson of the Citizen’s Nuclear Information Center in Tokyo, a 1996 accident at a plutonium reprocessing plant in Japan has revived interest in the Marshallese proposal.⁴⁹

American “non-support” of these proposals to store *high-level waste* and *spent nuclear fuel* led to their grinding to a halt through the end of 1995 and 1996.⁵⁰ But a different proposal, one which would have *low-level waste* stored on a Marshallese atoll received a positive response from members of at least one branch of the U.S. government. Elton Gallegly, chairman of the

⁴⁶ “N-waste talks in Taiwan.” Marshall Islands Journal. 14 April 1995.

⁴⁷ “Japan: No N-waste support.” Marshall Islands Journal. 21 April 1995.

⁴⁸ “Japan: No N-waste support.” Marshall Islands Journal. 21 April 1995.

⁴⁹ “Japan N-accident prompts interest in RMI.” Marshall Islands Journal. 18 April 1997. 11.

⁵⁰ These two categories of waste (high-level and spent nuclear fuel) are the most dangerous and are the ones with the lengthy (thousands of years) half-lives. High level waste is waste with high concentrations of radioactivity and is heat-generating. It contains large amounts of long-lived radioactive elements. Spent nuclear fuel consists of the actual rods used in the reactor. Once they have served their purpose and are removed, they remain hot and intensely radioactive. Some see vitrification (“incorporation of high-level waste into a glass matrix”) as a partial solution, but the stable characteristics of the vitrified body cannot be guaranteed for the tens of thousands of years it will be radioactive.

Low-level waste (LLW) accounts for around 80 per cent of nuclear waste by volume and 1 per cent of radioactivity. These wastes do not require much shielding, just containment -- although there is some debate over the maximum radiation level that waste classified as “low-level” contains. LLW may be compacted down to quarter of its original volume -- it is usually combined with concrete in steel drums. Murray, Raymond. Understanding radioactive waste. 4th ed. Columbus: Battelle, 1994.

Congressional Subcommittee on Native American and Insular Affairs, and Don Young, chairman of the House Committee on Resources have urged the Clinton administration in a letter dated April 30, 1996 to positively support this latest Marshallese proposal for a feasibility study.^{51 52} However, the U.S. State Department has expressed the Clinton administration's continuing "non-support" of any proposal to import radioactive waste, *high-level or low-level*, into the RMI.⁵³

Reactions from around the Pacific Islands

Past and present nuclear waste dump proposals promoted by Japan and the U.S. have been vigorously and vociferously challenged by the entire region on the grounds that they smack of colonialism. The South Pacific Regional Environmental Program (SPREP) and the South Pacific Nuclear Free Zone treaty (SPNFZ) both arose at least in part out of opposition to these proposals.

SPREP Resolution No. 1, passed at the Conference on the Human Environment in the South Pacific in Rarotonga, Cook Islands in March 1982, requested that "... the Japanese, United States and other governments . . . abandon their studies of specific proposals to store or dispose of nuclear waste in the Pacific regional environment."⁵⁴

But to have such a proposal come from one of their own has presented the governments of the region with a unique challenge. Although careful to avoid outright criticism of the RMI,

⁵¹ "The Pacific's Lingering Nuclear Clouds." Pacific Islands Monthly. October 1996. 21.

⁵² "N-waste momentum." Marshall Islands Journal. 17 May 1996. 1.

⁵³ Waite, David. "Marshalls may allow nuclear site." Honolulu Advertiser. 31 May 1997. A1.

⁵⁴ Takeuchi, Gary. 1982. "Opposing nuclear waste disposal the Pacific Way: Appropriate regional institutions for Pacific Basin action." Available at the Hamilton Library, University of Hawai'i at Manoa. 28.

the proposals have been the source of no small measure of consternation from regional neighbors. The strongest response has come from the RMI's immediate neighbor to the west, the Federated States of Micronesia (FSM).

In a May 20, 1995 letter sent to RMI Minister of Foreign Affairs Phillip Muller, FSM Department of External Affairs Resio S. Moses stated:

With due respect, Mr. Minister, the thought of storing nuclear wastes in our region is so appalling after all these years of suffering and years of trying to prevent such damage from further accumulating in our region, that my government is deeply saddened to have to write in opposition to such an idea.⁵⁵

Wilfred Kendall of the RMI government fired back a response designed to assist the FSM in "develop[ing] an informed position" on the potential for a RMI nuclear waste storage or disposal facility. The letter accurately recounts the financial difficulties facing the RMI in cleaning up and returning exiled populations. But the letter goes on to state the RMI's mission of "helping solve the worldwide nuclear waste dilemma, and thus advancing the prospect of world peace and protection of the global environment," and ends with an assertion that advanced storage and transport technology, mated with the Marshalls "stable" geology, could ensure the construction of "secure" storage facilities, guarded and watched over by the IAEA.⁵⁶

Moses responded that while the FSM "stands ready to do all it can to support any undertaking toward remedying the problem of contamination . . . an international nuclear waste

⁵⁵ Panholzer, Tom. "FSM opposes storage of nuclear waste in RMI." Marshall Islands Journal. 3 June 1994: 1.

⁵⁶ Kendall, Wilfred ('Chairman of the National Commission on Protection and Maintenance of Global Health, Environment, Peace and Security of the RMI'). Letter to Resio S. Moses (FSM Secretary of External Affairs). Marshall Islands Journal. 17 June 1994. 10.

dump next door will undoubtedly compromise the sustainability of its sovereign territory and its people.”⁵⁷ Apparently the writers of the feasibility study proposal had thought about such criticism, and suggested spreading the wealth -- extending compensation to neighbor nations.⁵⁸ Such a provision bolsters claims by neighboring states that unilateral action by the RMI on such a proposal brings risk to the region, not just the RMI.

The Most Reverend Amando Samo, Catholic Bishop of the Caroline Islands, spoke out against the Marshallese proposal in the same paragraph with condemnation of French and American use of Pacific locations for furtherance of their nuclear programs:

The Republic of the Marshall Islands is also entertaining offers to convert some of its islands into a radioactive garbage dump . . . We cannot put the entire blame on France and the U.S., however. Our own island nations are compliant with these foreign powers because of the profits they stand to reap from these arrangements. Ecological concerns regarding their own communities and the rest of the Pacific are secondary to the immediate gain they receive from those powers. So is the mission of peace that Pacific nations would like to embrace.⁵⁹

South Pacific Forum members (with the exception of the FSM), who for decades have railed against French nuclear activities in the region, uttered “hardly a peep” about the Marshallese proposal at the 1994 Forum in Brisbane,⁶⁰ despite the fact that these proposals run contrary to the antinuclear policies the 15 Forum countries have pioneered for over the years, including the South Pacific Nuclear Free Zone. RMI Foreign Minister Phillip Muller even

⁵⁷ Moses, Resio S. Letter to Wilfred Kendall. 27 June 1994. Marshall Islands Journal. 8 July 1994. 8.

⁵⁸ Johnson, Giff. “Waste disposal proposed . . . again?” Marshall Islands Journal. 20 May 1994.

⁵⁹ Samo, Amando. “Are we our own worst enemies?” Marshall Islands Journal (6 October 1995) reprint of speech given at the Conference on Just Development. Apia, Western Samoa. 16 September 1995.

⁶⁰ “The Forum Way: Condemn the French but ignore the Marshalls.” Islands Business Pacific. October 1994: 16.

remarked “we definitely expected more criticism . . .”⁶¹ But immediate, overt criticism of member nations is not the Forum Way, and certainly not in keeping with the Pacific Way. Even the FSM, which had objected strongly before the Forum, said nothing about the proposal during the meeting.

New Zealand’s Prime Minister Jim Bolger did briefly state that he did not wish to see the Marshalls setting up a nuclear waste facility and that New Zealand could not accept such a proposal going ahead. Australian Prime Minister Paul Keating politely pointed out that the Marshalls had not sought Forum endorsement of the proposals.⁶²

The Waigani Convention, an initiative of Papua New Guinea, was introduced at the 1995 Forum and would ban the importation of all hazardous and radioactive waste from outside the convention area, and control waste movements within the convention area. Many of the Forum nations signed, but President Kabua only offered to sign the convention if the U.S. cleaned up the nuclear testing affected atolls.⁶³

American Samoan Rep. Eni F.H. Faleomavaega, while harshly critical of a proposal to store spent nuclear fuel and high-level waste on Palmyra advanced by an American group, spoke carefully regarding the Marshallese proposal, stating that if other plans for economic development (including continuing aid from the U.S.) worked out, “we may be able to avert this (nuclear

⁶¹ “Marshalls fall out.” Islands Business Pacific. September 1994. 48.

⁶² Panholzer, Tom. “Forum wrap up: Waste, fisheries and resource management tops agenda.” Marshall Islands Journal. 26 August 1994.

⁶³ “President Amata Kabua: Marshalls ready to drop N-waste dump plans.” Marshall Islands Journal. 20 October 1995. 13.

waste) option.”⁶⁴

The debate within the RMI

Opposition to and controversy swirling around the proposal has come not only from outside the Marshalls, but from within as well. In May 1994 Alik J. Alik, Jaluit Senator, sent an open letter to President Kabua requesting that a nationwide referendum or plebiscite be held before the study went any further.⁶⁵ In October 1994, Senator Alvin Jacklick also called for a “mandate from the people” before discussions proceeded.⁶⁶ Jointly, Alik and Jacklick introduced a bill to the Nitijela in early February 1995 “to provide for a referendum on whether the Marshall Islands should establish a facility for the storage of nuclear waste.”⁶⁷ No such referendum was ever held.

Two players in the latest rounds of nuclear waste debates are Jonathan Weisgall, a Washington, D.C. attorney who has led the twenty-year-plus long legal battle against the U.S. Government for compensation for the Bikinians and now manages the trust fund set up for the Bikinians by the U.S. Government, and Jay Niedenthal, an ex-Peace Corps volunteer who is married to a Bikinian, lives with his family in Majuro, and now serves as Trust Liaison, a resident adviser to the Bikinians on external affairs. Niedenthal and Weisgall engaged in a vitriol-filled exchange of letters in the Marshall Islands Journal in March and April of 1995.

⁶⁴ “Rep. Faleomavaega doesn’t like N-waste, but . . . Concern for RMI waste plan muted.” Marshall Islands Journal. 20 June 1997. 4.

⁶⁵ Alik, Alik J (Jaluit Senator). Letter to President Amata Kabua. Marshall Islands Journal. 20 May 1994. 7.

⁶⁶ “Sen. Jacklick: No mandate for nuclear waste talks.” Marshall Islands Journal. 28 October 1994.

⁶⁷ “N-waste vote wanted.” Marshall Islands Journal. 10 February 1995. 21.

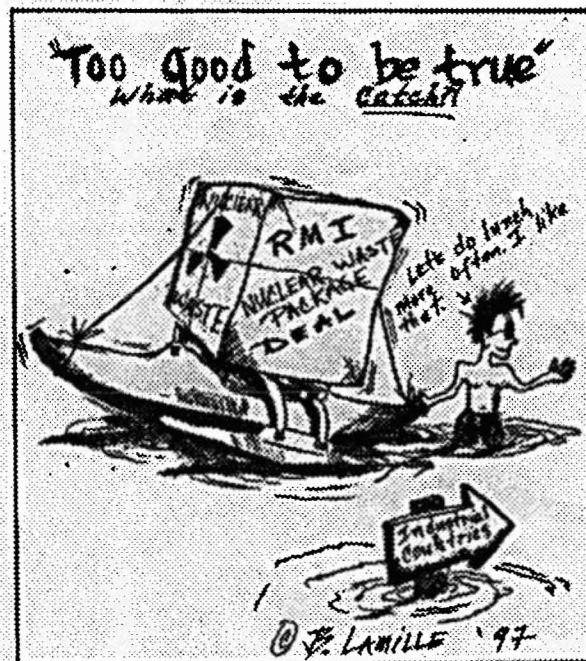
The stage was set on March 5, 1995, when the Kili/Bikini/Ejit local government signed a resolution requesting that Weisgall, their longtime attorney, educate the community about nuclear waste. In a March 17, 1995 letter to the editor, 'Citizen' Niedenthal accuses a "greedy, self-centered . . . abominable, abortionable" Weisgall of playing "moral ping-pong" and working to sacrifice the future of "[his] children's birthright."

In his March 31, 1995 response, Weisgall responded to Niedenthal that "I do not believe it is my position to be a great white father for the Bikini people." Weisgall stated that he was merely pursuing options for the Bikinian leaders to consider, and that the nuclear waste feasibility study was only one option of three in the works (the other options being a pending claim before the Nuclear Claims Tribunal, and an appeal to Congress for increased funding for atoll cleanup). Interestingly, in early May 1994 Weisgall was quoted as saying that the nuclear waste proposal was a "nonstarter" and "that even with a willing recipient, it won't come. You'd need the entire 7th fleet to guard it from terrorist attack."⁶⁸

Once fully informed of the specifics of the proposals, the Bikinians decided against the nuclear waste option. The Bikini Council effectively removed their atoll from consideration as a nuclear waste storage site with this May 1995 statement, "because our old men and old women still desire to return to their homeland . . . we will not be pursuing the nuclear waste option for our islands."⁶⁹

⁶⁸ "Weisgall: It won't happen." Marshall Islands Journal. 13 May 1994.

⁶⁹ Bikini Atoll website, retrieved 13 July 1997. www.bikiniatoll.com/radclean.html



The skeptic's credo. Marshall Islands Journal. 4 July 1997.

The Virginia-based Babcock & Wilcox (B & W) Nuclear Environmental Services Inc. advanced the most recent proposal for the storage of radioactive waste, this for the five year "holding" of *low-level* waste from Japan and Taiwan. According to one source, Wotho (presently inhabited) and Erikub (uninhabited, but used by Wotho residents for its food resources and as a turtle sanctuary) atolls were the sites under consideration.⁷⁰ On May 9, 1997, the RMI government signed an agreement authorizing B & W to conduct a feasibility study, and declared that they were forming a joint venture corporation to advance development of the project.⁷¹ Taipower was willing to pay for the feasibility-related costs.⁷²

⁷⁰ Waite, David. "Marshalls may allow nuclear site." Honolulu Advertiser. 31 May 1997: A1.

⁷¹ "N-waste 'frozen.'" Marshall Islands Journal. 27 June 1997: 3.

⁷² According to Cabinet Minister Litokwa Tomeing. "Marshall Islands President puts nuclear storage plans on indefinite hold." Pacific Report. 30 June 1997. 1.

Also in May 1997, Senator Jacklick announced that he was forming a Marshall Islands anti-nuclear organization to campaign against the nuclear waste importation proposals.⁷³ Jacklick said that a facility would change lifestyles for some of the Marshallese for the worse. “There will be restrictions on use of islands -- people won’t be able to fish or visit the islands, people may have to be relocated. . .”⁷⁴

Factors affecting the feasibility of an RMI nuclear waste storage or disposal site

At this point, it is appropriate to examine the specifics of feasibility and desirability of a nuclear waste storage/disposal site in the RMI. Significant obstacles to the realization of a plan to import nuclear waste into the RMI exist in each of four areas -- technical, legal, diplomatic/economic/social, and moral.

Technical

The low-lying atolls and reef islands of which the RMI is comprised, surrounded as they are by a massive, interdependent marine environment, are not necessarily good candidates for nuclear waste storage or disposal facilities, despite claims of “geological stability” and distance from air and sea lanes. The specific dangers vary depending on the type of radioactive waste stored -- high-level and spent nuclear fuel, or low-level.

The proposals for storage of high-level waste and spent nuclear fuel involve the drilling of a tunnel thousands of feet down into the basaltic rock underlying an atoll. Determining the

⁷³ “New anti-nuke group forming.” *Marshall Islands Journal*. 9 May 1997. 10.

⁷⁴ Ibid.

character and fault-structure of naturally-porous basalt rock (where high-level waste would be stored, well below the “coral cap”⁷⁵) with a sufficiently high degree of certainty is nearly impossible. Faults/cracks in rocks surrounding a bore-shaft could provide an outlet for radioactivity into the ocean. Gas generated through biological action on organic material in the wastes (usually in low and intermediate level wastes) and from the corrosion of steel and concrete could raise the pressure locally and damage engineered structures or open up cracks that could serve as radioactive pathways.⁷⁶

Seepage could begin ten years into the life of the shaft, or a thousand. The problem is that no one really knows to what extent irregular, undetectable cracks exist, or what effect later geological events will have on the site. But whatever the cause for the potential occurrence of seepage, radioactive elements would find the ocean a most effective means of transportation to other areas -- and into the food chain.⁷⁷

If significant oceanic contamination were to occur, cleanup could be next to impossible. The same dispersing characteristic of the ocean environment promoted by proponents of oceanic

⁷⁵ Coral cap -- the “rock” layers comprised of progressively older coral reefs which formed (and continue to form) atop the original volcanically-produced basalt protrusion as it gradually sinks back into the earth’s crust. Over the millenia this coral cap has overlaid the basalt to depths in the thousands of feet. Darwin hypothesized about this coral cap in his subsidence theory of atoll formation, and was only proven correct fifty years ago after deep drilling experiments at Enewetak Atoll hit basaltic rock after drilling through nearly 5,000 feet of coral. Not all atolls have coral caps as deep as Enewetak’s -- but all proposals for deep-disposal on atolls stipulate disposal in basalt rock. Merlin, Capelle, Keene, Juvik, Maragos. Keinikkan Im Melan Aelōn Kein: Plants and environments of the Marshall Islands. Honolulu: East West Center, 1997. 2.

⁷⁶ If adequate ventilation were absent. “Pacific paradise, nuclear nightmare.” Greenpeace. 1995.

⁷⁷ Affecting fish stocks locally, and thanks to the highly migratory species, potentially throughout the Pacific.

disposal of low-level waste⁷⁸ could spread much more potent radioactive material far from a leaking high-level waste/spent nuclear fuel site. Indeed, the IAEA (International Atomic Energy Commission) has stated:

Compared with buildings, lands and forests, the control of the spread of [radioactive] contamination to and in aquatic systems and the cleanup of such systems poses more difficult problems for which no satisfactory solutions are currently available . . . In view of the enormous scale of the oceanic marine environment it seems unlikely that any deliberate decontamination procedures could ever be envisaged.⁷⁹

There is also the possibility of future inundation of the proposed site -- by tidal waves, or more worrying, rising sea levels -- which requires consideration.⁸⁰ The tidal wave scenario is especially worrisome in the case of low-level wastes, which are usually stored above-ground (but would obviously pose the same threat if more dangerous wastes were also stored above-ground). If the entrance shaft to a deep disposal or storage site was inundated by rising sea levels, the

⁷⁸ For years nuclear waste (mostly low-level) was dumped over the side of ships and into the ocean -- the theory being that the sheer size and depth would "sufficiently" dilute and disperse the radioactive material. This practice was stopped in the early 1970s (thanks to political pressure brought to bear by environmental concerns). The oceans were used as a dumping ground regularly by Belgium, the Netherlands, (landlocked) Switzerland, Japan, and the United Kingdom -- and occasionally by France, Germany, Italy, Sweden, and the U. S. Gershey, Klein, Party, Wilkerson. Low Level Radioactive Waste: From Cradle to Grave. 98.

⁷⁹ "Cleanup of Large Areas as a Result of a Nuclear Accident." IAEA Technical Report. 1989.

⁸⁰ Of course, whether or not inundation would be a "problem" depends on the type of storage facility constructed.

possibility of retrieval or monitoring would be greatly complicated.⁸¹ Worse yet, an aboveground storage facility drowned by a rising sea level (or typhoons and tsunamis) could be compromised.

It is possible that future humans could accidentally disturb the waste if it is disposed of and not continuously monitored. Humans do not have a proven capability of reliably transmitting information across hundreds of generations. In the case of high-level waste and spent nuclear fuel, the integrity of the waste containment structures must be assured for thousands of years. Even with the advent of improved information storage systems and technology, we cannot be positive that warnings about the nature of and dangers associated with a nuclear waste repository can be made clear across millennia.⁸² These on-site-warning-system design difficulties would be compounded in the case a sub-seabed or atoll environment.⁸³

There is also the problem of transportation (for all types of waste). Surface transportation of waste accumulations from their present storage locations to ships waiting to sail the waste

⁸¹ The "fire and forget" or "keep it around and monitor it" debate is a fractious one. Proponents of proposals which would create repositories from which it would be exceedingly difficult to monitor or retrieve the deposited nuclear waste say that the creation of such "untouchable" sites would eliminate the risk of accidents or criminal activity (acts of terror or otherwise) resulting in a spread of radioactivity. They doubt the wisdom of entrusting a problem with a lifespan of thousands of years to governments and civilizations whose nature and duration are indeterminable. Proponents of monitored facilities say that waste needs to be closely watched to make sure that it is not seeping into groundwater or otherwise escaping the containment area -- they also contend that should waste-treating, radioactivity (or at least risk) reducing technologies be developed in the future, access to the waste must be assured so that such technologies may be applied.

⁸² The U. S. Department of Energy has put together a panel of experts (three anthropologists, an archaeologist, two linguists, two materials scientists, two astronomers, a psychologist, an architect, and an artist) to discuss how to construct a durable warning system that will warn people against disturbing waste disposal sites. The proposed monuments would be grander in scale than the pyramids, and must last for thousands of years. The DOE panel includes one member of the team that designed the "universal" greeting system aboard the Pioneer spacecraft. Reading such proposals gives a sense of the serious, "permanent" nature of the nuclear waste disposal problem. "The 10,000-year Warning." *The Futurist*. Sept-Oct 1992. 17-19.

⁸³ It would certainly be a more difficult undertaking to construct a warning monument underwater, or on an atoll which may be below sea-level a few hundred years from now. Just another example of how many uncertainties exist with an atoll repository.

to the Marshalls entails risk. Vessels loaded with nuclear waste sailing across the world's oceans are potential disasters, even with the supposedly super-durable shipping containers and the use of specially-designed nuclear transport ships.

A guarantee of security for a Marshallese nuclear waste facility against terrorist attack (especially one contained high-level wastes and spent nuclear fuel) would be difficult. Although some argue that the isolated, mid-ocean location of such a repository far from air and sea lanes serves as a barrier to such attacks, the ability for the RMI to provide the security that would still be required is suspect. The U.S. may also take issue with such a site placing an extra, unenvisioned burden on it as Compact-specified guarantor of Marshallese security.

The technical barriers to construction and operation of an atoll-based repository are many. Significant levels of uncertainty and risk exist in continental-repository proposals -- those uncertainties and risks are not alleviated in an atoll/mid-ocean environment.

Legal ⁸⁴

The legal restrictions bearing on RMI nuclear storage/disposal fall into two general categories. The first are *international/regional controls*. The second are *U. S. statutory constraints* (including the Compact of Free Association).

International/regional control. The RMI is a party to the SPREP treaty⁸⁵ which is intended to prevent dumping and reduce pollution from the storage of toxic and hazardous wastes

⁸⁴ Much of the information in this section is drawn from the 1995 Greenpeace report entitled "Pacific paradise: Nuclear Nightmare."

⁸⁵ Signed November 26, 1986. Ratified May 4, 1987.

within the 200-mile EEZs (Exclusive Economic Zones) of the nations party to the treaty. This treaty explicitly prohibits “disposal into the seabed and subsoil of the Convention Area,” which rules out any sub-seabed disposal schemes (Article 10). Article 11 states that “. . . the Parties shall prohibit the storage of radioactive wastes or other radioactive matter in the Convention Area.” Unfortunately the language of this treaty does not explicitly include ‘land.’ However, the SPREP treaty states often that it means to protect ‘marine and coastal environments.’ Greenpeace takes the position that SPREP does indeed cover the ‘land’ in the RMI, since “islands such as those that comprise the RMI are low-lying atolls and are ecologically an inherent component of both the marine and coastal environments, meaningful distinctions between ‘land’ and ‘marine’ environments cannot be readily drawn.”⁸⁶

The RMI is also a party to the Basel Convention, which controls international movement of hazardous wastes and their disposal. Although the treaty does not explicitly include radioactive materials, the principal espoused in the Basel Convention treaty is to minimize movement of hazardous wastes.

U.S. Statutory Impediments. Under the terms of the Compact of Free Association, the U.S. government is barred from “dispos[ing] of... any... radioactive... materials in an amount or manner which would be hazardous to public health or safety”⁸⁷ in the RMI. There is similar language for the *storage* of radioactive materials.⁸⁸ These same restrictions are placed on “any

⁸⁶ “Pacific paradise, nuclear nightmare.” Greenpeace. 1995. Section 2.2.1.

⁸⁷ Compact of Free Association, Section 314(a)(2).

⁸⁸ Compact of Free Association, Section 314(d).

other government or any nongovernmental party” engaged in such activities.⁸⁹ Although that language in itself does not seem very restricting, the determination of what is “hazardous to the public health or safety” is actually a rather high hurdle. Atomic Energy Act guidelines, EPA standards, and U.S. Nuclear Regulatory Commission health and safety requirements are all brought into play. The RMI has stated that it does not intend to invite the U.S. to dispose of any of its radioactive materials in a proposed storage or disposal site.⁹⁰

However, much of the spent nuclear fuel in the world is of U.S. origin (including most spent fuel in Western Europe, Japan, South Korea, and Taiwan).⁹¹ The Atomic Energy Act prohibits the transfer of spent U.S. origin nuclear fuel from a recipient nation to a third party without U.S. consent. It also prohibits the transfer of any spent nuclear fuel (of any origin) burned in a U.S.-supplied reactor.⁹²

Potential diplomatic, economic, and social impact -- collateral damage

“Pursuing the waste dump option could be the issue that decides for the Marshalls whether it is part of a Pacific community that has shown its power in regional cooperation, or a nation that is viewed as one that will ‘sell’ its islands to the highest bidder.”⁹³ The Marshalls’ entertainment

⁸⁹ Compact of Free Association, Section 104(d).

⁹⁰ “A response to issues raised by the United States Secretary of Energy and a U.S. government interagency group concerning a proposed preliminary feasibility study for a nuclear materials disposal facility in the Marshall Islands.” Marshall Islands Journal. 26 September 1994. 5.

⁹¹ “Pacific paradise, nuclear nightmare.” Greenpeace. 1995. Section 2.3.3.

⁹² Atomic Energy Act, Sections 123a(5).

⁹³ “No thank you.” Editorial. Marshall Islands Journal. 1 January, 1988.

of radioactive-waste storage and disposal proposals have not gone unnoticed by other Pacific island countries. Most have withheld overt criticism, but certainly the entertainment of these proposals has disappointed the Pacific community.

Although revenue from the operation of a nuclear waste repository would be significant, its presence in the Marshalls could have somewhat countervailing effects. Planned tourism and fisheries development could be affected. Potential collateral economic damage could include a nervous consumer reaction to the fresh and frozen fish which presently accounts for nearly 70% of the Marshalls export income. It is also possible that some tourists might be scared off by the presence of an international nuclear waste facility. RMI Senator Alvin Jacklick said that regardless of how remote the nuclear waste site would be, "it is still in the Marshall Islands. Will tourists want to come here then? No, because no one wants to get contaminated."⁹⁴ All rhetoric aside, these are issues that must be considered in a full characterization of the economic impact a nuclear waste facility could have.

Some have advanced the argument that in terms of societal and lifestyle-affecting impact, a nuclear waste facility may not be all that different than the South Korean-financed US\$1 billion casino and resort complex which was recently given the green light, and which may displace hundreds of Mili islanders.⁹⁵ In terms of potential impact on Marshallese society, how much

⁹⁴ "Sen. Jacklick: No mandate for nuclear waste talks." Marshall Islands Journal. 28 October 1994.

⁹⁵ Five hundred residents of Mili atoll will have to move to another island to make way for this project -- and are supposed to be provided with prefab houses and "relocation allowances." The South Korean investor Mo Haeung Yong and his Marshallese partner Kejjo Bien plan to begin construction by October 1997. The plan, approved by Mili's two traditional chiefs gives Yong gets a 50-year lease with a 50-year option with the same terms. Plans include two hotels, a golf course, restaurants, bars, and all the necessary utilities (Mili has no infrastructure at present). Landowners will get 1 percent of gross revenues from operations, and perhaps employment opportunities. Pacific Magazine Online (July/August 1997 issue). "Islanders sign casino deal with South Koreans." Retrieved 20 July 1997. www.pacificmagazine.com/busi_1.htm

different are they?

Concern over lifestyle-impacting development is certainly justified. But it is important to realize that nuclear waste is in a category all its own. The physical, permanent risks involved in allowing the siting of a nuclear waste repository are irreversible. If containment structures fail, or “highly anomalous events” occur to once again confirm Murphy’s Law, the potential for losing everything (not just investment or tourist dollars) is real. Experts can provide assurances that risks are very, very slim, but with so much at stake, how much compensation is the assumption of such risk worth?

For centuries the Marshallese have looked to the ocean as sole sustainer of life and economy.⁹⁶ To put that asset at risk in any way is a poor bet -- a gnawing away at the ropes of the safety net that has so dependably provided for the needs of the people.

With all the talk about sustainable development, ecotourism, resource management and the like going around, it is more than a little ironic (but not surprising, given the compensation figures) that this antithesis of sustainable development (the concept which certainly has its own set of problems) has been given so much consideration.

Moral

The transfer of hazardous waste from developed to developing nations (or, north-to-south) is generally frowned upon, and for good reason. The developed nations have pursued and

⁹⁶ And so it remains today -- fish account for 70% of RMI exports -- chilled fish, frozen fish, and pet fish (comprising 47%, 21%, and 1% of total exports, respectively). They all account for more than a few meals to most Marshallese families. 1994 figures. RMI Online (official RMI government online information service). Trade statistics: www.clark.net/pub/rmiemb/tradstat.html

exploited nuclear technology, and have generally enjoyed the “benefits” of nuclear power, without having given adequate thought to the waste-management costs which must be paid and hazards which must be avoided by thousands of future generations. Citizens of the nuclear-powered countries enjoy supposedly “cheap” electricity -- but no one in these countries wants a nuclear waste dump constructed in their backyard⁹⁷ -- there is even an acronym for such sentiment -- NIMBY (Not In My Back Yard).

For underdeveloped nations to shoulder the radioactive burden of the nuclear power-using nations who exercised insufficient care in developing the technologies that produced these wastes is unconscionable. Some argue that the potential nuclear waste-importing underdeveloped countries are merely exercising their most lucrative economic option, that the economic benefits should outweigh all other concerns. But more than economic issues are of import here. It is important to keep the historical background, political situation, and bargaining position that create the willingness to import such wastes in mind.

Take North Korea’s recent acceptance of a Taiwanese proposal to store supposedly “low-level” nuclear waste. Taiwan was facing a firestorm of national controversy over the siting and handling of the waste from its six U.S.-supplied reactors, and found that exporting the problem provided a way out. The deal is worth more than US\$200 million to North Korea, a nation which is presently struggling to feed its population. This plan is a prime example of nuclear prostitution,⁹⁸ and could “set an international precedent . . . It would be the first time, anywhere,

⁹⁷ To say that “no one” does is not entirely accurate. The Mescalero Apache Indians of New Mexico accepted a US\$2 billion contract (US\$15-25 million annually over 40 years) to house spent nuclear fuel on their remote reservation until the Yucca Mountain repository opens. Satchell, Michael. “Dances with nuclear waste: A New Mexico tribe offers a home for radioactive garbage.” U.S. News & World Report. 8 January 1996. 29-30.

⁹⁸ “Will Take Nuclear Waste For Food.” U.S. News & World Report. Feb 17, 1997. 45.

that final storage of radioactive waste is sold to the lowest foreign bidder.”⁹⁹ Taiwan negotiated the deal with full knowledge that millions of North Korean men, women and children face starvation -- as their government starves for hard currency with which to buy them food, even resorting to taking on radioactive waste.¹⁰⁰

Establishing internationally-monitored, secure regional dumps, locations negotiated between willing, nuclear power-utilizing participants to be located within the borders of one of said countries is one thing -- but seeking to dispose of the waste in underdeveloped, non-nuclear power-using nations desperate for revenue should be morally unacceptable.

But the RMI isn't North Korea . . .

While the RMI is certainly no dying-on-the-vine North Korea, situational inequities do make for an unbalanced bargaining situation between it and potential nuclear waste exporters. A growing population, a lack of exploitable resources, uncertainty over continued American aid, and ever-growing demand for “higher” standards of living all work toward making the RMI susceptible to offers of relatively high levels of compensation. The amount hat overriding rational abhorrence of risk.

The RMI government denies that U.S. should have a say what it considers to be an exercise of sovereignty, saying that:

⁹⁹ Greenpeace (Press release). “Taiwan nuclear waste shipment: Greenpeace calls for responsible above-ground monitored storage in Taiwan.” 3 April 1997.

¹⁰⁰ The waste is in the form of up to 200,000 barrels of “low-level” waste for final storage in North Korea. Greenpeace has recently charged Taipower (Taiwan’s state-run power utility) with mislabeling some of the waste as “low-level,” when in fact (or according to their on-site audit) some of it contains some highly radioactive material (higher than what is general considered “low-level”). Greenpeace (Press release). “Taiwan power company misrepresents radioactivity of nuclear waste to be sent to North Korea.” 15 May 1997.

The United States should not concern itself with any [negative political ramifications of developed countries transporting nuclear waste to developing countries], as it is not invited to participate in the facility being considered by the Marshall Islands. Rather, the United States should be concerned with the political ramifications of failing to provide adequate funds for the cleanup of contamination from its nuclear weapons testing program and for the treatment of persons afflicted with radiation-induced illnesses in the Marshall Islands.¹⁰¹

A well deserved jab at American neglect to be sure. But nuclear waste is for keeps -- a decision made by this generation that has the potential to affect thousands of generations yet to come (in the case of high-level and spent nuclear fuel) -- it will last many many times longer than any empire or nation has ever existed. Money for treatment of the radiation victims of U.S. testing is in place (but not for full cleanup of the nuclear-testing affected islands), and although the exiled condition of the Bikinians (and the Enewetakese) is unfortunate, they themselves realize that the risks of importing waste for a quick assurance of money to cleanup their atolls is not a good deal. They know firsthand what happens when trust is put in radioactive-gift-bearing suitors.

For the good of mankind? The perils of (mis)placing faith

“If the United States government and the scientists of the world want to use our islands for furthering development, which with God’s blessing will result in kindness and benefit to all

¹⁰¹ Kendall, Wilfred (RMI Ambassador to the United States). Letter to Secretary of Energy Hazel O’Leary. 26 September 1994. Included with the letter was a 13-page document entitled “A response to issues raised by the United States Secretary of Energy and a U.S. government interagency group concerning a proposed preliminary feasibility study for a nuclear materials disposal facility in the Marshall Islands.” 13.

mankind, my people will be pleased to go elsewhere.”¹⁰² This was the reported response of Juda, chief of Bikini, to a plea made by Commodore Ben Wyatt, military governor of the Marshalls, in 1946 for the use of Bikini atoll to develop a bomb “for the good of mankind and to end all world wars.”¹⁰³ Fifty years and several irradiated islands and lives lived in exile later, trust in outsiders bearing safety assurances and the offal of nuclear technology should be hard to come by. For decades, Bikinians, Enewetakese, and others have listened to the guarantees and best-guesses of scientists who later reversed their opinions and findings -- seeming to have rarely erred on the side of caution.

The plight of the exiled Bikinians is heartbreaking. But the Bikinians themselves see the faulty reasoning behind the “waste-dump-for-cleanup” proposal, rejecting the scheme in a May 1995 resolution of the Bikini Council.¹⁰⁴ ¹⁰⁵ In February 1997, more than 80 Bikinian elders returned to their home island to hold groundbreaking ceremonies in anticipation of a rehabilitation and cleanup operation which would clean Bikini and Eneu,¹⁰⁶ to be financed by the trust fund established by the U.S. Scientists from Livermore Labs, the IAEA (International Atomic Energy

¹⁰² Hezel, Francis X. Strangers in their own land: A century of colonial rule in the Caroline and Marshall Islands. Honolulu: University of Hawaii, 1995. 271.

¹⁰³ Ibid.

¹⁰⁴ Bikini Atoll website, retrieved 13 July 1997. www.bikiniatoll.com/radclean.html

¹⁰⁵ A New York Times Magazine article published in May 1995 suggested that some of the reluctance stemmed from a February 1995 resolution that “[President Amata] Kabua managed to push through the Marshalls legislature . . . which recognized Kabua and several other tribal chiefs as the owners of Bikini, and declared that those chiefs would receive a third of the income derived from the use of the island.” North, David. “Cashing in on nuclear waste.” Pacific Islands Monthly. June 1994. 11-13.

¹⁰⁶ But which doesn’t address the remaining 21 islands, all of which were affected. The money in the trust fund is simply inadequate to pay for a cleanup of the entire atoll. “Bikini: What about the other 21 islands we call home?” Marshall Islands Journal. 10 January 1997. 7.

Agency) and the National Academy of Sciences all agree that the plan will work. Wary of the assurances of scientists, Bikini Mayor Tomaki Juda says that “we can’t start the cleanup until high U.S. officials give it to us in writing that they will stand behind us if we come back.”¹⁰⁷

Shifting rationales

Rationalizing the nuclear waste importation proposals to both Marshallese citizens and to the outside world has been difficult for proponents of the plans. The argument for such a scheme has not remained static over the years. In the early 1980s, concern over ocean dumping of nuclear waste and potential contamination of the ocean led to the Marshall Islands government to offer the use of Bikini to store the low-level waste. In the late 1980s, money for a larger measure of economic independence was the driving rationale.

The latest proposal has inspired proponents to trundle out the widest array of rationales yet. Proponents of the nuclear waste disposal and storage scheme have couched the project in part in terms of service to the global community, of contributing to nonproliferation and “trying to contribute to a world problem in a methodical, controlled and constructive way.”¹⁰⁸ These official RMI government statements regarding service to be rendered to the global community have been mentioned in the same breath as pronouncements that revenue estimates have been pegged in the billions of dollars.¹⁰⁹ This revenue is mentioned as the potential liberator of the RMI from its dependence on foreign aid, another rationale.

¹⁰⁷ “Groundbreaking signals Bikinians’ hope of return.” *Pacific Magazine*. May/June 1997. 37.

¹⁰⁸ Quote from Ambassador Wilfred Kendall. “RMI \$ billions from world’s waste?” *Marshall Islands Journal*. 6 May 1994. 1.

¹⁰⁹ *Ibid.*

But 1994 also brought the seemingly unassailable motive -- that these nuclear waste importation proposals were being pursued primarily to finance the cleanup of the atolls irradiated by American nuclear testing. The sacrifice of several islands as nuclear waste storage sites was pronounced justifiable in that the cash earned would be used to clean up other islands for habitation or other uses.¹¹⁰ Radioactive material from other irradiated islands would be moved to the designated disposal island(s).¹¹¹ Skeptical Jay Niedenthal had this to say about the probable use of revenue from a nuclear waste repository:

It is preposterous to hear REPMAR officials repeatedly state that the reason they want to store nuclear waste in the Marshalls is so they can 'help' clean Bikini and Enewetak. Let's face a fact here: None of that money would ever go to the people of Enewetak or Bikini. This money would go to another round of white automobiles and white elephant projects.¹¹²

In an apparent attempt to smooth out opposition to the proposals from Pacific neighbors, President Amata Kabua alluded to possible benefits from a Marshall Islands nuclear waste storage site accruing to them, saying, "it would indeed be encouraging if (revenues generated) would be adequate to not only support modest development objectives in the Marshall Islands, but also those of our neighboring countries."¹¹³ So far, such implied offers of compensation for cooperation have not quieted the concern expressed by the Marshall Islands' Pacific neighbors.

¹¹⁰ "U.S. urged to face problems." Marshall Islands Journal. 23 December 1994. 1.

¹¹¹ "Taiwan \$ sought for N-waste plan." Marshall Islands Journal. 13 June 1997: 1.

¹¹² Niedenthal, Jack. "Kiss America goodbye." Marshall Islands Journal. 27 June 1997. 16.

¹¹³ Johnson, Giff. "Marshalls fall out." Islands Business Pacific. September 1994. 48-50.

Potential effect on Compact renegotiation talks

American policy since 1994 has been one of “non-support” for the undertaking of pre-feasibility studies.¹¹⁴ More recently, the news of the Marshalls’ pursuit of nuclear waste disposal projects has not sat well with many in the U.S. government, and the message has been clearly sent that continued Marshallese pursuit of nuclear waste cash could impede Compact extension/renegotiation talks. According to Jay Niedenthal, Trust Liaison for the Bikini Council, he and the other members of the Bikinian delegation to Washington were “lectured for 45 minutes on the evils of nuclear waste even though we aren’t involved in this crazy scheme” when paying a visit to the RMI-and-Compact-renewal-friendly Hawaii Senator Akaka’s office.¹¹⁵ What sympathy and goodwill that may exist for the Marshall Islands, perceived by many as the responsibility of a guilty United States, may be in danger if these proposals are acted upon.

Frozen

Ataji Balos, Chairman of the Committee on Foreign Affairs & Trade, recently spoke out against the plan in June 1997, accusing companies with radioactive waste proposals flocking to the RMI over the past few months, seeking “to take advantage of President Kabua’s death to negotiate an agreement which would commit the government in ways not envisioned by him,” noting that “one company, in particular, aggressively and repeatedly pressured officials and representatives of the RMI government to sign an agreement.” He committed himself to working to stop any further such proposals, having learned “an important lesson about the vulnerability of

¹¹⁴ “The Pacific’s Lingering Nuclear Clouds.” Pacific Islands Monthly. October 1996. 21.

¹¹⁵ Niedenthal, Jack. “Kiss America goodbye.” Marshall Islands Journal. 27 June 1997: 16.

our country to outsiders.”¹¹⁶

Due to a combination of these factors -- recoil against pressure by nuclear waste suitors, mild shock at extremely negative reactions from “friendly” members of the U.S. Congress with Compact negotiations about to begin, and perhaps an attack of better judgment, the plans have stalled. On June 24, 1997, Imata Kabua announced in a Washington, D.C. meeting with Interior Secretary Bruce Babbitt that the RMI had put “a freeze” on the feasibility study.¹¹⁷

Conclusion

The RMI government’s “freeze” on the nuclear waste importation feasibility study does not mean that nuclear waste importation proposals have been scrapped for good. The proposals have lain dormant in the past, only to arise again and again. It is quite possible that such proposals may be entertained in the future if the RMI government deems its needs to be great enough and the compensation sufficient.

The rationales that proponents of the proposals within the RMI government have offered in support of the plans have proliferated over the years. Concern over oceanic contamination from the Japanese ocean dumping of *low-level* nuclear waste drove the first Marshallese offer in 1980. Desire for greater economic independence drove the offer to store *high-level waste and spent-nuclear fuel* in 1987. An array of rationales was advanced in 1994 in the separate offers to import and store or dispose of *high-level and low-level waste*. Furthering the cause of

¹¹⁶ Balos, Ataji. Public address. “Radioactive waste disposal in the Republic of the Marshall Islands.” Marshall Islands Journal. 13 June 1997: 7.

¹¹⁷ “N-waste ‘frozen.’” Marshall Islands Journal. 27 June 1997: 1.

nonproliferation, caring for the safety of the large populations within nuclear-power-using countries, achieving economic independence, and even the possibility of providing financial aid to regional neighbors have all been put forward as rationales by proponents. But most importantly, moral cover was provided by the contention that revenues received from the importation of waste would finance a full clean-up of the atolls affected by American nuclear testing.

Proponents argue that little harm can come from feasibility studies, while opponents of the nuclear waste dump proposals worry that what are billed as purely “preliminary feasibility studies” may quickly and privately be greenlighted by officials soothed by assurances of safety and won over by relatively large amounts of compensation, despite repeated RMI government assurances that should a feasibility study return positive results, regional and international opinions would be considered before construction would actually begin.¹¹⁸ This concern is justified, as government officials have tended to be secretive about the specifics of the nuclear waste importation proposals, and have been silent about other investment schemes in the past (recall the letters of guarantee near-debacle).

Keeping in mind the Marshalls’ nuclear past and the Pacific Way, reaction to the RMI government’s nuclear waste importation proposals from the Pacific community has been muted, despite the region’s longstanding position against nuclear waste being transported through or imported into the Pacific region. Debate within the Marshall Islands has been more open and intense.

The development of a nuclear waste facility in the Marshall Islands is problematic not just from a technical standpoint, but from legal and moral angles as well. Potentially significant

¹¹⁸ “Study a ‘cover’ for n-waste storage?” Marshall Islands Journal. 6 June 1997. 8.

negative diplomatic, economic, and social impacts exist and must also be considered. The factors examined all point toward the undesirability of the undertaking of a nuclear waste importation scheme.

The only way to reduce the likelihood that these proposals are acted upon is to work toward a solution to the RMI's social and economic problems, including financing a comprehensive cleanup of the nuclear testing affected atolls. President Amata Kabua stated in October 1995 that the nuclear waste importation proposals would be dropped, and the RMI "would have no problem signing the Waigani Treaty if the United States fulfilled its obligations and cleaned up the waste."¹¹⁹ Whether that offer still stands under the new administration is unclear.

The "freeze" put in place on the nuclear waste importation proposals by Imata Kabua is only that -- a wait-and-see measure. It is the Compact renegotiation talks with the U.S. and the resulting amount of aid secured (or not secured) that will determine the future level of willingness within the RMI government to consider nuclear waste importation proposals.

¹¹⁹ "President Amata Kabua: Marshalls ready to drop N-waste dump plans." Marshall Islands Journal. 20 October 1995. 13.

References

Reports and papers

Forsberg, Charles W. "An ocean island geological repository -- a second-generation option for disposal of spent fuel and high-level waste." 1989/1992 (missing publication date). Radioactive Waste Management.

Greenpeace New Zealand. "Pacific paradise: Nuclear nightmare." Auckland: Greenpeace New Zealand, 1995.

Lenssen, Nicholas. "Nuclear waste: The problem that won't go away." Worldwatch Paper 106. Washington: Worldwatch Institute, 1991.

Solomon, Anthony V. "A report of the U.S. Government survey mission to the Trust Territory of the Pacific Islands." 2 vols. Washington: 1963.

Spicuzza, William L. "National policy implications of storing nuclear waste in the Pacific region." National Security Affairs Issue Paper 82-1. Washington: GPO, 1982.

Takeuchi, Gary. "Opposing nuclear waste disposal the Pacific Way: Appropriate regional institutions for Pacific Basin action." 1982. Available at the Hamilton Library, University of Hawai'i at Manoa.

United Nations Development Program. "Pacific human development report." Suva: United Nations Development Program, 1994.

Van Dyke, J., Smith, K. R., Siwatibau, S. 1983. "Nuclear activities and the Pacific Islanders." Presented at the Nuclear Electric Power Conference, Resource Systems Institute, East-West Center, Honolulu, Hawaii.

"Environmental and ethical aspects of long-lived radioactive waste disposal." Proceedings of an International Workshop organized by the Nuclear Energy Agency. 1-2 Sept. 1994. Paris: OECD, 1995.

"International transfer and disposal of hazardous wastes." South Pacific Regional Environment Program (SPREP) Occasional Paper No. 1, prepared by the Pacific Basin Consortium for Hazardous Waste Research. Sept. 1988.

"Radioactive waste repository licensing." Synopsis of a symposium sponsored by the Board on Radioactive Waste Management, National Research Council. Sept. 1990. Washington DC: National Academy, 1992.

U.S. Government documents

United States. Congress. Senate. Committee on Energy and Natural Resources. Hearing on Pacific spent nuclear fuel storage. 96th Congress, 1st Session, S. 1119. Washington: GPO, 1979.

Books

Brookins, Douglas. Geochemical aspects of radioactive waste disposal. New York: Springer-Verlag, 1984.

Burns, Michael. Low-level radioactive waste regulation: Science, politics and fear. Chelsea: Lewis, 1988.

Dibblin, Jane. Day of two suns: U.S. nuclear testing and the Pacific Islanders. New York: New Amsterdam, 1987.

Douglas, Norman, Nagaire Douglas. Pacific Islands Yearbook. 17th ed. Suva: Fiji Times, 1994.

Gershey, Edward, Robert Klein, Esmeralda Party, Amy Wilkerson. Low-level radioactive waste: From cradle to grave. New York: Van Nostrand Reinhold, 1990.

Hezel, Francis X. Strangers in their own land: A century of colonial rule in the Caroline and Marshall Islands. Honolulu: University of Hawaii, 1995.

Kemp, Ray. The politics of radioactive waste disposal. New York: Manchester University Press, 1992.

Louka, Elli. Overcoming national barriers to international waste trade. International policy and law series 22. Dordrecht: Graham & Trotman/Martinus Nijhoff, 1994.

Merlin, Mark, Alfred Capelle, Thomas Keene, James Juvik, James Maragos. Keinikkan Im Mejan Aelōñ Kein: Plants and environments of the Marshall Islands. Honolulu: East West Center, 1997.

Murray, Raymond. Understanding radioactive waste. 4th ed. Columbus: Battelle, 1994.

National Research Council, Panel on Social and Economic Aspects of Radioactive Waste Management. Social and economic aspects of radioactive waste disposal. Washington DC: National Academy, 1984.

Nuclear Energy Agency. Radioactive waste management in perspective. Paris: Organization for Economic Cooperation and Development, 1996.

Ogashiwa, Yoko. Microstates and nuclear issues: Regional cooperation in the Pacific. Suva: University of the South Pacific, 1991.

Weisgall, Jonathan. Operation Crossroads: The atomic tests at Bikini atoll. Annapolis: Naval Academy Press, 1994.

Resolutions

Association of Chief Executives of the Pacific Basin. Resolution to oppose nuclear waste dumping and storage in the Pacific basin region. 15 August 1980.

Speeches and public addresses

Balos, Ataji. Public address. "Radioactive waste disposal in the Republic of the Marshall Islands." Marshall Islands Journal 13 June 1997: 7.

Kabua, Amata. "Nuclear waste disposal of key importance to RMI." South Pacific Forum. 1994.

Samo, Amando. "Are we our own worst enemies?" Marshall Islands Journal (6 October 1995) reprint of speech given at the Conference on Just Development. Apia, Western Samoa. 16 September 1995.

Trask, Haunani-Kay. "Environmental racism in the Pacific Basin." Conference on Environmental Racism. University of Colorado at Boulder, 29 September 1993.

Marshall Islands Government statements and documents

"The effects of atomic radiation." Statement by Mrs. Neijon R. Edwards, Counsellor, Permanent Mission of the Republic of the Marshall Islands to the United Nations, to the Special Political and Decolonization Committee (the Fourth Committee), on item 84: The effects of atomic radiation.

Muller, Philip. General Assembly Plenary (27th meeting). Press Release GA/8744. 11 October 1994.

Correspondence

Alik, Alik J (Jaluit Senator). Letter to President Amata Kabua. Marshall Islands Journal. 20 May 1994. 7.

Kendall, Wilfred (RMI Ambassador to the United States). Letter to Secretary of Energy Hazel O'Leary. 26 September 1994. Included with the letter was a 13-page document entitled "A response to issues raised by the United States Secretary of Energy and a U.S. government interagency group concerning a proposed preliminary feasibility study for a nuclear materials disposal facility in the Marshall Islands."

Kendall, Wilfred ('Chairman of the National Commission on Protection and Maintenance of Global Health, Environment, Peace and Security of the RMI'). Letter to Resio S. Moses (FSM Secretary of External Affairs). Marshall Islands Journal. 17 June 1994. 10.

Moses, Resio S. Letter to Wilfred Kendall. 27 June 1994. Marshall Islands Journal. 8 July 1994. 8.

Marshall Islands Journal articles and editorials

As of this writing, no index exists for the Marshall Islands Journal. These are the nuclear waste related articles I located.

Round three

Niedenthal, Jack. "To Mr. Anonymous: Now is not the time to be one of the . . . MEN IN BACK." 18 July 1997. 11.

Mehau, Tim. "Don't deny RMI an opportunity: Conduct the feasibility study." 18 July 1997. 18.

Anonymous. "Wait just a minute!" 11 July 1997. 19.

Cartoon. "Too good to be true." 4 July 1997.

"B & W says RMI N-facility will improve 'health and economic well being.'" 4 July 1997. 18.

Niedenthal, Jack. "Kiss America good-bye." 27 June 1997. 16.

"N-waste 'frozen.'" 27 June 1997. 1.

"Rep. Faleomavaega doesn't like N-waste, but . . . Concern for RMI waste plan muted." 20 June 1997. 4.

"B&W + RMI form joint venture firm for waste plan." 13 June 1997. 8.

"Taiwan \$ sought for N-waste plan." 13 June 1997. 1.

"Kill N-waste pact." 13 June 1997. 1.

"RMI: Study only, not storage." 6 June 1997. 8.

"Study a 'cover' for n-waste storage?" 6 June 1997. 8.

"N-waste action draws crowd." 23 May 1997. 1.

"New anti-nuke group forming." 9 May 1997. 10.

"N-waste storage: It's not the answer to Marshall Is. economic woes." 9 May 1997. 10.

"Japan N-accident prompts interest in RMI." 18 April 1997. 11.

"Copson's Wake/Palmyra plans hit new roadblocks." 21 March 1997. 11.

"Waste feasibility proposals on table." 7 March 1997. 4.

"North Pacific dump planned: Copson takes his N-waste plan back to Congress." 21 February

1997. 10.
- "Forum countries keep Greenpeace happy." 13 September 1996. 11.
- "Greenpeace visits Majuro." 13 September 1996. 13.
- "N-waste opponents win a round in DC." 30 August 1996. 15.
- "N-waste off agenda?" 2 August 1996. 3.
- Johnson, Giff. "For the good of mankind and, uh, a billion dollars." 26 July 1996. 8.
- "The Pacific: Not the solution to nuclear waste storage." 19 July 1996. 12.
- "N-waste momentum." 17 May 1996. 1.
- "President Amata Kabua: Marshalls ready to drop N-waste dump plans." 20 October 1995. 13.
- "Taiwan waste talks hit critical juncture." 9 June 1995. 1.
- "Greenpeace down on Marshalls' proposal." 28 April 1995.
- "Japan: No N-waste support." 21 April 1995.
- "N-waste talks in Taiwan." 14 April 1995.
- "Greenpeace report: U.S. law will block N-waste export to RMI." 31 March 1995. 22.
- "Bikini Council votes for N-waste 'education.'" 10 March 1995. 1.
- "N-waste vote wanted." 10 February 1995. 21.
- "Pacific countries worry about N-waste shipment." 27 January 1995. 5.
- "Japan wants to store its own nuclear waste." 13 January 1995.
- "U.S. urged to face problems." 23 December 1994. 1.
- "RMI offered \$160 million for waste site." 25 November 1994. 3.
- "RMI waste pow wow set for Honolulu." 4 November 1994.
- "Marshalls turn to blast United States." 28 October 1994. 3.
- "No nukes for RMI." 28 October 1994. 3.
- "Sen. Jacklick: No mandate for nuclear waste talks." 28 October 1994.
- "Who will benefit from N-waste project?" 28 October 1994.
- "RMI invites United Nations agencies to join in nuclear waste pre-feasibility study." 14 October 1994.
- Panholzer, Tom. "Forum wrap up: Waste, fisheries and resource management tops agenda." 26 August 1994.
- "Post-Forum talks on nukes." 19 August 1994. 23.
- Johnson, Giff. "U.S.: We don't support RMI N-waste proposal." 19 August 1994. 3.
- "Let Marshallese decide." 12 August 1994.
- "N-waste not 'done deal'; 'feasibility study is simply that.'" 5 August 1994.
- Robinson, Mary. "Moses and the first commandment." 17 June 1994. 13.
- Panholzer, Tom. "FSM opposes storage of nuclear waste in RMI." 3 June 1994. 1.
- Johnson, Giff. "Waste disposal proposed . . . again?" 20 May 1994.
- "Here comes the hullabaloo." 20 May 1994. 8.
- "Weisgall: It won't happen." 13 May 1994.
- "RMI \$ billions from world's waste?" 6 May 1994. 1.
- "RMI seeks pre-feasibility study on waste." 6 May 1994. 2.
- "Underwood co-sponsors anti-nuclear dumping measures in Pacific." 18 March 1994.
- "What is sustainable development?" 4 March 1994. 17.

- Niedenthal, 'Citizen.' Letter. 7 April 1995. 9.
 Weisgall, Jonathan. Reply to letter of 'Citizen' Niedenthal. 31 March 1995. 8.
 Niedenthal, 'Citizen.' Letter. 17 March 1995. 8.
 Bungitak, Kunar. Letter. 1 July 1994.
 Niedenthal, 'Citizen.' Letter. 17 June 1994. 8.

Round two

- "Admiralty negotiating nuclear waste deal?" 8 September 1989. 1.
 "N-waste proposal dropped." 4 August 1989.
 Quote of the week (Tony deBrum). October 14 1988.
 "Times story sparks comment." 20 May 1988. 14.
 Cartoon. "A day near future." 22 April 1988. 2.
 "Nuclear irony." 22 April 1988. 2.
 "Nevada Congresswoman visits Bikini." 15 April 1988.
 Teare, John. "State, Rep-Mar officials woo Nevada delegation, but . . . U.S. officials voice opposition to Marshalls N-waste." 5 February 1988.
 "No conflict, says President." 29 January 1988.
 "N-feasibility study debated." 29 January 1988.
 "N-'hot-potato': Dump debate heats up Nitijela." 22 January 1988. 1.
 "President only asked for feasibility study." 15 January 1988.
 "President's request gets U.S. nod for nuclear waste dump study." 1 January 1988. 7.
 "No thank you." 1 January 1988.

Thompson, Jim. Letter. 29 June 1989. 6.

Round one

Missing pieces? I was unable to get ahold of some issues of the Micronesian Independent (precursor of the Marshall Islands Journal) for the second half of 1980 and most issues of the Marshall Islands Journal for the second half of 1981 -- missing from both the Pacific Collection and the general holdings of the University of Hawai'i at Manoa (Hamilton) library.

- "Japanese newspaper reports on President Kabua's Japan trip." 6 October 1982. 1.
 "Japanese request nuclear waste storage." 1 May 1981. 1.
 Smith, Dan. "Dependence or independence? Kabua frustrated by American interference." Micronesian Independent. 26 September 1980. 1.

Selected Marshall Islands Journal articles on non-nuclear waste issues

- "Philip Muller clarifies: Passports not for sale." 18 July 1997. 1.
 "If U.S. has problem, what about RMI?" 11 July 1997. 22.

- "Not anti-Chinese but. . . Local businesses: trampled." 4 July 1997. 1.
- "Mayor Tomaki Juda: 'We want to hear directly from President Clinton.'" 10 January 1997. 7.
- "Bikini: What about the other 21 islands we call home?" 10 January 1997. 7.
- "Greenpeace says Admiralty plan will bring 125 million pounds of toxic waste." 21 July 1989.
- "Promoters outline waste disposal plan." 28 October 1988.
- "Waste-men want atoll." 21 October 1988. 1.

Periodicals and newspapers

- Butler, Steve. "Will take nuclear waste for food." U.S. News & World Report. 17 February 1997. 45.
- Chapman, William. "U.S. proposes storing spent nuclear fuel on Pacific isle." Washington Post. 28 March 1979.
- Corn, David. "Give us your tires." The Nation. 21 May 1990. 696.
- Hussein, Bernadette. "The Pacific's lingering nuclear clouds." Pacific Islands Monthly. October 1996. 20-21.
- Johnson, Giff. "\$100m-a-year lures Marshalls to consider nuclear waste." Islands Business Pacific. March 1988. 23.
- _____. "Two faces of nuclear coin." Islands Business Pacific. August 1994. 20-25.
- _____. "Marshalls fall out." Islands Business Pacific. September 1994. 48-50.
- _____. "Marshall N-waste march continues." Islands Business Pacific. June 1995. 50-52.
- North, David. "Cashing in on nuclear waste." Pacific Islands Monthly. June 1994. 11-13.
- _____. "Waves of financial 'scams' strike Island countries." Pacific Islands Monthly. September 1996. 23.
- Satchell, Michael. "Dances with nuclear waste: A New Mexico tribe offers a home for radioactive garbage." U.S. News & World Report. 8 January 1996. 29-30.
- Waite, David. "Marshalls may allow nuclear site." Honolulu Advertiser. 31 May 1997. A1.
- "Groundbreaking signals Bikinians' hope of return." Pacific Magazine. May/June 1997. 37.
- "Marshalls waste facility study gets some support." Pacific Magazine. November 1996. 13.
- "Seven islands studied as possible national parks, ecological reserves."
- "Tell these Americans this is a sordid deal." Islands Business Pacific. January 1995. 14.

"The Forum Way: Condemn the French but ignore the Marshalls." Islands Business Pacific. October 1994. 16.

"The 10,000-year Warning." The Futurist. Sept-Oct 1992. 17-19.

"Japan equivocal on nuclear dumping." Pacific Islands Monthly. March 1985. 22.

From Pacific Report

"Marshall Islands President puts nuclear storage plans on indefinite hold." 30 June 1997. 1.

"Marshall Islands ready to drop plans for nuclear waste dump." 25 September 1995. 1.

"Marshall Islands confident that full independence will be confirmed by United Nations: President Amata Kabua talks to Pacific Report editor Helen Fraser." 20 December 1990. 4.

"Greenpeace denounces US plans for Pacific garbage dumping project." 21 June 1990. 1.

"Final study of Marshall Islands garbage dumping plan due this week." 7 June 1990.

"Second company wants to dump garbage in the Marshall Islands." 1 February 1990.

"Admiralty Pacific head denies plans for nuclear dumping." 12 October 1989. 6.

"Nuclear waste scam revealed in Marshall Islands scheme." 28 September 1989.

"Greenpeace attacks Marshall Islands garbage dumping plan." 31 August 1989.

Journals

Ogashiwa, Yoko S. "Regional protests against nuclear waste dumping in the Pacific." Journal of Pacific Studies. Volume 15, 1990. 51.

Internet resources

RMI Online (official RMI government online information service). Trade statistics. Retrieved 10 July 1997. www.clark.net/pub/rmiemb/tradstat.htm

Pacific Magazine Online (July/August 1997 issue). "Islanders sign casino deal with South Koreans." Retrieved 20 July 1997. www.pacificmagazine.com/busi_1.htm

Pacific Islands Report (compiled by the Pacific Islands Development Program and the Center for Pacific Island Studies at the University of Hawai'i). 22 July 1997. "Honolulu City Council's Mirikitani opposes Marshalls nuclear waste storage plan." Retrieved 23 July 1997. 166.122.161.83/pireport.htm

Forum Communiqué (1996). Retrieved 20 July 1997. www.mft.govt.nz/Publications/spfc.htm

Greenpeace press releases

“Taiwan power company misrepresents radioactivity of nuclear waste to be sent to North Korea.” 15 May 1997.

“Taiwan nuclear waste shipment: Greenpeace calls for responsible above-ground monitored storage in Taiwan.” 3 April 1997.

“Public interest group joins together at Taiwan mission to protest Taiwan’s plan to dump nuclear waste in Korea.” 14 February 1997.

“Greenpeace condemns Taiwan radioactive waste shipment.” 31 January 1997.